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A Study of Model of Vocational Curriculum Development Under Vocational Education Commission Using Cross-Impact Analysis

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Abstract

This study was conducted to develop a model of vocational course curriculum development under the vocational education commission through the use of a cross-impact analysis. The data was collected through an interview and an evaluation with the experts. The findings showed that a model of vocational course curriculum development under the vocational education commission through the use of a cross-impact analysis consisted of three parts: Input, Process and Outputs and showed some possibility to be used for a development of a vocational course curriculum.

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Keywords: Course curriculum development , cross impact analysis;

1. Introduction

The vocational education is very important to the students in helping them to have knowledge, skills and ability as well as a vocational skill. In Thailand, it was found that the present situation of the qualities of the graduates appeared to be irrelevant to the needs of the industries. Mostly, the teachers in industries in the vocational schools did not have much actual involved experience in that field. This made the teachers unable to organize a good lesson nor to help develop the students to become exactly what the industries need or look for. Therefore, the idea of inviting the industries to take part in the development of the curriculum and in the Education Management at the schools was a great solution to help create cooperation between the schools and the businesses in developing many perfectly matched curriculums to support the needs (İşgöret al., 2009).

The course curriculum was regarded as a classroom level which had the direct effect to the students (Chookhampaeng, 2003). In developing the course curriculum, the developers needed to focus on not only the course descriptions but also the results after the courses on the learners as the knowledge, the ability or the experience from the subject and the requirements in the job and so on) due to their equal importance (Promchun, 2007). The needs assessment is a very efficient tool (Wongwanich, 2005) for a survey on the needs of the public

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and the people involved. It guarantees the right data to help establish a purpose for the development of the curriculums or even to handle some most urgent obstacles, which would then result in the best solutions to them (Oliva, 1992; Taba, 1962; Suangsuwan, 1998).

For the plan to solve the problems, there was one technique as a future situation evaluation, which would focus on a possible influential or a possible reaction of other factors. The result of the future analysis would show the influential of a situation having effect to other ones. This method was called cross impact analysis. It involved a decision of an expert, which took the possibility of an occurrence of one situation into account. This would result in more ease, efficiency and precision (Gordon, 1994).

When the cross impact analysis was applied with the development of the professional course, it would guarantee confidence and understanding the causes of the problems when developing the course in the teachers. Besides, it would result in an appropriate solution to the problems. Therefore, the researcher became so interested in model of vocational course curriculum development under vocational education commission through the use of the cross-impact analysis. This would result in perfect planning and an development of a course curriculum. Finally, this would create the highest benefit towards the students in the knowledge and the skills needed in the industries.

2. The purposes

The purpose of this study was to develop a model of vocational course curriculum development under the vocational education commission through the use of a cross-impact analysis from the experts' view. While the research objectives to achieve in this study were:

- a. To develop a model of vocational course curriculum development under the vocational education commission through the use of a cross-impact analysis.
- b. To evaluate a model of vocational course curriculum development under the vocational education commission through the use of a cross-impact analysis.

3. Method

This study was a quantitative and qualitative data collecting research. The research sample consisted of 4 experts in Research and 4 experts in development of vocational curriculums taken through a purposive sampling were interviewed on the components and the models. Both of the components and the models were next evaluated for their suitability and possibility.

The research instrument in this study consisted of 1) a structured interview used on the experts 2) a possibility and suitability evaluation form for the Model of Vocational Curriculum Development Under Vocational Education Commission through the use of a Cross-Impact Analysis. A questionnaire used in this study was in a 5-point-rating scale : 1= Poor, 2 = Fair, 3 = Good, 4 = Very Good and 5 = Excellent. In analyzing the data, Mean (M), Standard deviation (S) were employed.

4. Results

4.1 The results were found from interviewing the experts on the development of a model of vocational course curriculum development under vocational education commission through the use of a cross-impact analysis.

All of the experts unanimously agreed that there were 3 parts in the development of a model of vocational course curriculum development under vocational education commission through the use of across-impact analysis: Input, Processes and Output.

4.1.1 Input

The experts on the development of a curriculum stated that A course description, An objective, A course of standard and A course capacity were the main components detailing each subject, which needed for a job analysis as well as a task analysis in order to be a framework for a study on the Industries' needs about how a teaching and learning should be like. Shown below are the statements of the experts:

“Considering the development of each curriculum, there should be a Standard course and a Competency Course added into the Input so that it would satisfy the curriculum requirements” (Curriculum Expert: May 3, 2012)

“In developing the curriculums, there should be an interview on the people involved such as the teachers, the business owners, and the students in order to have flexibility” (Curriculum Expert: May 2, 2012)

“TQF should be brought into the processes of the Input so as to create some modernization” (Curriculum Expert: April 20, 2012)

“There should be an analysis on the general conditions of the society, the changes of the technology and the necessary skills at work” (Curriculum Expert: April 20, 2012)

“It seems necessary to have an analysis on the targets and the general purposes so as to lead to the next step analysis and to have a survey on the needs of the public ... and later on, it will move to a job analysis and a task analysis as expected” (Curriculum Expert: May 2, 2012) Show in figure 1.

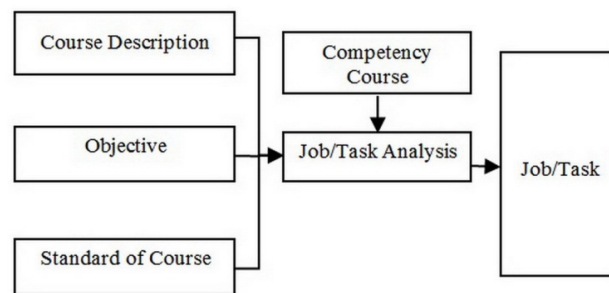


Figure1. The Input factor

4.1.2 Processes

The experts on the research and the development of a curriculum implied that there should be 2 steps for the processes : The first step : The complete needs assessment consisted of 2 stages as : the 1st stage was to study the needs namely 1) the indication of the need 2) the prioritization of the needs and the 2nd stage was the Cross-Impact Analysis namely 1) the cause analysis 2) the need solution. The second step : This was a stage of designing each course curriculum in accordance with the first step namely 1) the job analysis 2) the course planning and unit selection 3) the establishment of the behavioral objective 4) the content design 5) the design for teaching and

learning activities 6) the design of instruction media in class 7) the measurement and evaluation design, from the above content analysis through the interview, Shown below are the statements of the experts :

“There should be an opportunity given to a college to make a curriculum so that it will satisfy the needs of the public, and it can be done through the need analysis or the Cross-Impact-Analysis” (Curriculum Expert: April 2, 2012)

“Is the cross-impact analysis for the cause analysis or not ? The next step, the Fish bone will be used for this job. The Output and the solutions will be created. Please make the study units ! Those procedures : the job analysis, the establishment of the behavioral objective, the content design and the design of instruction media in class, were simply called a proactive course design, which would be the purposes of each subject” (Curriculum Expert: April 2, 2012)

“To bring the technique of the need analysis to create a curriculum is to imply what the needs of the customers are, not like they need one thing, the teachers teach another. This curriculum when used with the vocational studies will definitely satisfy or answer the needs and it is so complete, so perfect.” (Research Expert :April 19, 2012)

“The way to organize the teaching and lecturing can be done through the Cross-Impact analysis to help arrange the small details as well as to put them in order from small to big. This will surely help out.” (Research Expert: April 19, 2012) Show in figure 2.

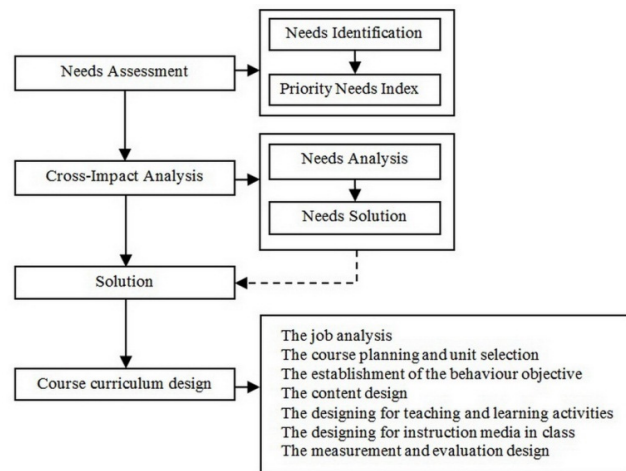


Figure2. The complete needs assessment process and course design

4.1. 3 Outputs

The experts on the research and those on the development of a curriculum agreed in one thing which was that the outputs from the use of the development of the curriculum would create a professional course that was the best systematic solution to the problems of the students as well as being the most matched professional course with the needs of the businesses.

4.2 The findings from the evaluation of the model of vocational course curriculum development under vocational education commission through the use of the cross-impact analysis by the experts

4.2.1 The Input factor

From the results of the evaluation of the possibility and the suitability on the Input factor, it revealed that both the components and the procedures for the analysis of the Input factor were high in possibility and suitability in all sides

($M > 3.68$). Especially, the suitability of the components for the analysis of the Input factor with the highest average figure ($M = 4.35$)

4.2.2 The Processes

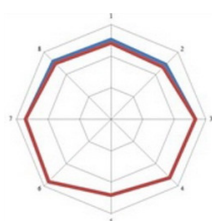
From the results of the evaluation of the possibility and the suitability on the Processes, it showed that the components and the procedures were high in possibility and suitability in all sides ($M > 3.68$). Especially, the possibility and the suitability of the stages of the cause analysis with the highest average figure ($M = 4.73$).

4.2.3 The Outputs

From the results of the evaluation of the possibility and the suitability on the Outputs, it indicated that it was high in possibility and suitability in all sides ($M > 3.68$). Especially, the suitability of the results, which was in the highest average ($M = 4.45$) as shown in the table 1 and figure 3.

Table 1. The findings from the evaluation of the model of the vocational course curriculum development under vocational education commission through the use of the cross-impact analysis

Item for evaluation of the model	Suitability of Model			Possibility of Model		
	M	S	Level of agreement	M	S	Level of agreement
Input						
Components used in the analysis of inputs	4.35	0.93	High	4.20	1.24	High
The process of analyzing the input	4.25	0.88	High	4.10	1.17	High
Process						
Components used in the process	4.56	0.58	High	4.56	0.58	High
The step of identifying needs	4.50	1.03	High	4.50	1.25	High
The step of prioritizing needs	4.20	0.84	High	4.20	0.84	High
The step of cause analysis	4.73	0.46	High	4.73	0.46	High
The step of needs solution	4.60	0.52	High	4.60	0.52	High
Output						
The results (such as unit plan, behavioural objective, content etc.)	4.45	0.78	High	4.31	1.02	High



1. Components used in the analysis of inputs
2. The process of analyzing the input
3. Components used in the process
4. The step of identifying needs
5. The step of prioritizing needs
6. The step of cause analysis
7. The step of needs solution
8. The results

Figure 3. Experts' view on suitability and possibility of the model of vocational course curriculum development under vocational education commission through the use of the cross-impact analysis

5. Conclusion and Discussion

From the interview and the evaluation by the experts, it implied that the development of the course curriculum showed some possibility to be used for a development of a course with suitability, in which there were 2 main characters : the first one was that the development of the vocational course curriculum would bring in the course being perfectly matched with the needs of the businesses. This was because in the first stage, there was an analysis of the industries' needs. That was very important information for the developers of the curriculums to be better at forming the purposes in the development of the curriculum or to know that what the present problems were and what was the best solution for them (Taba, 1962; Oliva, 1992).

In this arrangement, there could be the best and most matched curriculum for the students and with the public (Grier, 2005), which drove the economy in a positive way. Another important aspect was that the experts gave their opinions on the development of the proactive course. That meant there had to be a way to deal with the problem of the development of the course. Because this model applied the cross-impact analysis technique to the processes of the development of the course curriculum. There were procedures for a problem analysis and a cause analysis, it helped open view to the teachers for the crisis as well as for the opportunity when preparing a lesson in advance. This would definitely result in great teaching success according to the research and find appropriate ways to develop students' achievement (Sungsuwan, 1999).

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